FINDINGS AND RECOMMENDATION REGARDING ISSUANCE OF SECTION 10 ENHANCEMENT OF SURVIVAL PERMITS FOR THE TAGSHINNY TREE FARM CONSERVATION PLAN

I. DESCRIPTION OF PROPOSAL

Tom and Sherry Fox of Tree Management Plus, Inc., and their co-owners (collectively termed Applicants) have applied to the U.S. Fish and Wildlife Service (Service) for enhancement of survival permits to authorize incidental take of 3 federally listed species (northern spotted owl, marbled murrelet, bald eagle), and 12 unlisted species, should they become listed during the term of the permit(coastal cutthroat trout, Oregon spotted frog, northwestern pond turtle, great blue heron, pileated woodpecker, osprey, northern goshawk, olive-sided flycatcher, long-eared myotis, long-legged myotis, Pacific Townsend's big-eared bat, and Van Dyke's salamander). The permit application is for the proposed implementation of the Tagshinny Tree Farm Conservation Plan (Plan), which includes a combined Safe Harbor Agreement and Candidate Conservation Agreement with Assurances (collectively termed Agreements) between the Applicants and the Service. The Plan also includes elements of a low-effect habitat conservation plan (HCP) for steelhead and coho salmon, subject to approval by the National Marine Fisheries Service.

The Agreements allow for the growth and enhancement of habitat for 17 species of fish and wildlife on private timber land owned and managed by the Applicants in Lewis County, Washington. The subject land consists of 5 parcels lying within 25 miles of each other and encompasses 144 acres. The Service permit associated with the Safe Harbor Agreement (hereafter termed SHA), would be in effect for 80 years, and would allow the Applicants to return the property to baseline conditions at the end of the permit term. The Service permit associated with the Candidate Conservation Agreement with Assurances (hereafter termed CCAA), would run concurrently with the SHA permit for 80 years, and be used once a covered, unlisted species became listed. The permits would be issued in accordance with section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended (ESA),the Service's Final Safe Harbor Policy (64 FR 32717, June 17, 1999), the Service's Final Policy for CCAAs (64 FR 32726, June 17, 1999), and the Service's Safe Harbor Agreements and CCAA Final Rule (64 FR 32706, June 17, 1999).

The Agreements address activities associated with commercial forest management activities, including site preparation and planting, thinning, regeneration harvest, road construction and maintenance, and brush control. The Agreements provide for economically viable management to occur under prescriptive measures aimed at conserving and enhancing habitat features for listed and unlisted species. The timber management activities are expected to result in the growth of habitat capable of being utilized by both listed and unlisted species covered by the Agreements.

The primary conservation elements of the Agreements are: extended harvest rotations of 50 to 80 years that will provide large trees, tree species diversity, and substantial understory growth;

commitment of nearly 20 percent or more of the ownership in forested habitat ≥40 years of age at all times throughout the 80-year permit term (>70 percent during 2 decades); provision of snags, green recruitment trees for future snags, and downed logs; protection of steep slopes and landslide-prone areas; riparian protection of the only fish-bearing stream with a 100-foot managed buffer and a 30- to 50-foot equipment limitation zone; wetland protection with a 75-foot managed buffer and a 30-foot equipment limitation zone; protection of nest trees occupied by northern spotted owls, marbled murrelets, or bald eagles, for 3 years after abandonment; and timing restrictions to limit harvest operations to minimize disturbance to nesting great blue herons. Section V of the Plan contains a more detailed account of the enhancement activities and conservation measures to be implemented under the Plan.

The permit associated with the SHA allows for the eventual return to baseline conditions at the end of the 80-year permit term. Baseline conditions can be described in terms of either population numbers of a listed species or quantity of occupied habitat, or both. Currently, there are no individuals of any of the three listed species known to occupy the Tagshinny Tree Farm. Baseline conditions for habitat for each of these species is based on the number of acres across all parcels, of the five forest age classes. Of the total forested acres on the tree farm, or 133 acres, about 75 percent is 0 to 20 years old, 23 percent is 40 to 60 years old, and 1.5 percent is ≥ 80 years old. None of the tree farm is in the 20 to 40-year or 60 to 80-year age classes. Since the minimum age that habitat is expected to be suitable for owls, murrelets, and eagles is in the age classes ≥40 years of age, the agreed-upon baseline for habitat is 19 percent (approximately 25 acres). That amount must be in age classes ≥ 40 years of age, including 2 percent that is > 80 years of age, when habitat is at the lowest point (3rd decade) during the Plan term.

Monitoring and reporting required in the Plan would demonstrate how management is consistent with enhancement activities and conservation measures for covered species. Reports would identify quantitatively what management has consisted of (such as amount of standing and down wood left after harvest, number and type of road maintenance activities, etc.), and reports would qualitatively assess the net benefit of Plan implementation to covered species.

II. EFFECTS

A. LISTED SPECIES

The economic goal of the Plan is to cultivate and increase mature timber on the covered lands over an 80-year period. The biological goal is to provide a small contribution of potential habitat for northern spotted owls, marbled murrelets, and bald eagles in a landscape dominated by intensive private land timber management practices, agriculture, and increasing rural residential development. Consistent with the Service's Safe Harbor Policy and Final Rule, the enhancement of survival permit associated with the SHA would authorize incidental take of owls, murrelets, eagles, and their progeny, on the five parcels of the Tagshinny Tree Farm as a result of lawful, long-term timber management activities, as long as baseline conditions are maintained. The proposed Agreement will provide a net conservation benefit to the northern spotted owl, marbled

murrelet, and bald eagle by providing more suitable forest habitat over the Plan term, than exists now, that may be used by these species to disperse, roost, forage, perch, and possibly nest.

Currently, there is no known occupancy of the tree farm by owls, murrelets, or eagles. The tree farm does provide some habitat, though, that could be used by owls, murrelets, or eagles. Bald eagles, in fact, have been observed perching on the Highway 12 parcel. See Table 1 for an assessment of listed species' use on each tree farm parcel. See "Effects of the Action" in the attached Biological Opinion for a detailed analysis of the effects of Plan implementation for each species.

It is expected that management under the Plan will result in an overall increase of older forest stands on the tree farm, thereby resulting in a net benefit for listed species. That is, stands in each of the five parcels are likely to provide some habitat that could be used by owls, murrelets, and eagles. However, it is anticipated that the likelihood of use by these species will be low, especially for owls and murrelets, because the parcels are individually small, disparate from one another, and not located within a landscape of habitat likely to be used by the subject listed species. Potential take of owls, murrelets, and eagles is anticipated to be relatively low, and is expected to be offset by the creation and retention of older, 50 to 85-year rotation timber on the tree farm parcels overall, the snag and green tree retention provisions, and the riparian and wetland buffers.

The proposed SHA and associated permit would allow the Applicants to return the land to baseline conditions at the end of the permit term. This would result in the loss of most of the suitable habitat for northern spotted owls, marbled murrelets, and bald eagles that has developed (concurrent with timber growth) on the property during the 80-year permit term. Nonetheless, 19 percent, or 25 acres, of the forested ownership greater than 40 years of age, will be maintained at the end of the permit term, or upon return to baseline.

B. UNLISTED SPECIES

The economic goal of the Plan is to cultivate and increase mature timber on the covered lands over an 80-year period. The biological goal is to provide a small contribution of potential habitat for the unlisted species covered by the Plan, some of which currently use the property, and others which could use the property during the permit term. (See Table 1 for an assessment of each unlisted species' use of the tree farm.) Consistent with the Service's CCAA Policy and Final Rule, the enhancement of survival permit associated with the CCAA would be issued when the Service makes the determination that the CCAA standard and permit issuance criteria are met. That standard requires that the conservation measures and the expected benefits, when combined with those benefits that would be achieved if it is assumed that similar conservation measures were also implemented on other necessary properties, would preclude or remove the need to list each of the covered, unlisted species. The permit would become effective for any of the covered species upon a final Federal listing determination for that species.

Table 1. Assessment of current species use of parcels covered by the Tagshinny Tree Farm Conservation Plan.

	SPECIES	CURRENT SPECIES USE BY PARCEL				
		HOME	KINZIE	HIGHWAY 12	BURCHETT ROAD	WINTER ROAD
	LISTED					
1	Northern spotted owl	Possible	Possible	Possible	Possible	Unlikely
2	Marbled murrelet	Unlikely	Unlikely	Possible	Unlikely	Unlikely
3	Bald eagle	Possible	Possible	Known	Unlikely	Unlikely
	UNLISTED					
1	Coastal cutthroat trout	Unlikely	Expected	None	None	None
2	Oregon spotted frog	Unlikely	Possible	None	None	None
3	Northwestern pond turtle	Unlikely	Possible	None	None	None
4	Great blue heron	Known	Known	Expected	Possible	Possible
5	Pileated woodpecker	Known	Known	Known	Possible	Possible
6	Osprey	Possible	Expected	Known	Unlikely	Unlikely
7	Northern goshawk	Possible	Possible	Possible	Unlikely	Unlikely
8	Olive-sided flycatcher	Possible	Possible	Possible	Possible	Possible
9	Long-eared myotis	Possible	Possible	Possible	Possible	Possible
10	Long-legged myotis	Possible	Possible	Possible	Possible	Possible
11	Pacific Townsend's big-eared bat	Possible	Possible	Possible	Possible	Possible
12	Van Dyke's salamander	None	Unlikely	Unlikely	None	None

Because the CCAA standard may be associated with a future listing decision by the Service under the ESA, we are required to analyze the conservation measures and possible effects of the CCAA as they would relate to a listing decision. When making a decision to list a species, the Service is required to determine whether the species is threatened by any of the following factors: 1) the present or threatened destruction, modification, or curtailment of its habitat or range; 2) overutilization for commercial, recreational, scientific, or educational purposes; 3) disease or predation; 4) the inadequacy of existing regulatory mechanisms; or 5) other natural or manmade factors affecting the species continued existence. Threats to the unlisted species covered by the CCAA, and related to each of these factors, are described below and summarized in Table 2.

1) Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range ~ Eleven of the12 unlisted species considered in these findings are affected by the destruction, modification, or curtailment of habitat or range, to such a degree that it would contribute to their need to be listed. All these species, except the osprey, are markedly affected by both the prevailing timber management on forested lands and by the conversion or manipulation of forests, wetlands, and riparian areas for a variety of other, non-forestry land uses. Causes for habitat or range loss or change are indicated below for each species. Also, refer to the section of the attached Biological Opinion titled STATUS OF THE SPECIES for a more detailed account of each species habitat needs, preferences, and sensitivities.

Coastal cutthroat trout - Both anadromous and resident forms of coastal cutthroat trout have been affected by habitat loss, habitat modification, and habitat curtailment. In southwest Washington, where the subject parcels lie, miles of cutthroat trout habitat have been affected by dams, which have resulted in changed water levels and fluctuations, loss of riverine and tributary habitats from inundation, and interference with both freshwater and saltwater migrations. Habitat loss and degradation has occurred in both estuarine and freshwater areas from diking, dredging, filling, and development. Habitat modification (degradation) has occurred from agriculture (grazing, cropping), timber management, and development, which eliminate or reduce riparian vegetation, in-channel wood and stream habitat complexity, and contribute excessive amounts of nutrients and fine sediments to the stream system.

Oregon spotted frog - Habitat loss and modification have affected Oregon spotted frogs and narrowed the suitability of wetlands for this species. Habitat loss has occurred directly through the filling, draining, and diking of wetlands; habitat loss continues from development in general. Modification (degradation) of this frog's wetland habitat has occurred largely from grazing, alteration of natural hydrologic regimes (through various land uses), and the introduction and spread of non-native vegetation. Riparian areas used by Oregon spotted frogs have generally been degraded through a variety of land use activities that reduce riparian cover, alter riparian microclimates, and degrade riparian stability. Also, this frog's range is likely being curtailed by the introduction and spread of non-native predatory aquatic species.

Table 2. Unlisted species covered by the Tagshinny Tree Farm Conservation Plan, and factors that are threats to their existence. (x indicates the factor is considered a threat to the species' continued existence)

	SPECIES	STATUS		FACTORS THAT MAY THREATEN THE SPECIES				
	Common Name	Federal	State	(1) Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range	(2) Overutilization for Commercial, Recreational, Scientific, or Educational Purposes	(3) Disease or Predation	(4) Inadequacy of Existing Regulatory Mechanisms	(5) Other Natural or Manmade Factors Affecting the Species Continued Existence
1	Coastal cutthroat trout	Species of Concern	--	x	x	--	--	x
2	Oregon spotted frog	Candidate	E	x	--	x	--	x
3	Northwestern pond turtle	Species of Concern	E	x	--	x	--	x
4	Great blue heron	--	C2	x	--	x	x	--
5	Pileated woodpecker	--	C	x	--	--	--	--
6	Osprey	--	M	--	--	--	--	x
7	Northern goshawk	Species of Concern	C	x	--	--	--	--
8	Olive-sided flycatcher	Species of Concern	--	x	--	--	--	--
9	Long-eared myotis	Species of Concern	--	x	--	--	--	--
10	Long-legged myotis	Species of Concern	M	x	--	--	--	--
11	Pacific Townsend's big-eared bat	Species of Concern	C	x	--	--	--	--
12	Van Dyke's salamander	Species of Concern	C	x	--	--	--	x

State Status Codes: E= endangered, C=candidate, M=monitor, C2=Criteria 2

Northwestern pond turtle - Habitat loss, modification, and curtailment has surely affected northwestern pond turtles, now reduced to a small percentage of their original range and known in only a few isolated populations (Hays et al. 1999). Diking, draining, ditching, development, and transportation networks have eliminated or altered aquatic habitats (size, extent, vegetative cover, depth, water regime), the continuity of those aquatic habitats, and the connectivity of those areas with upland habitats needed at certain life stages by these turtles.

Great blue heron - Loss of large trees along relatively undisturbed shorelines of both fresh and saltwater bodies has affected the ability of great blue herons to find suitable nest sites. Loss of shallow water habitats including wetlands, seasonally flooded farm fields, estuaries, and mudflats have decreased suitable foraging areas for herons.

Pileated woodpecker - Land uses that have removed older forests and large downed logs, large diameter snags and stumps, and mature trees with complex structural characteristics and defects, have destroyed and modified the pileated woodpecker's habitat. Development and agricultural practices typically remove most habitat for this species, while timber management results in loss of high quality habitat and alteration of remaining habitat.

Northern goshawk - Reduction in the abundance and extent of closed-canopy, late successional, mature, and expansive forests have likely affected northern goshawk populations in the Pacific Northwest. While goshawks are known to use a variety of forest types, their association with older forests, and their increased abundance in old growth forests, is documented (Thomas et al. 1993). Prey availability and suitable understory conditions affect goshawk foraging success, thus, modification of habitats that affect prey populations, and modifications (direct or indirect) that alter understory vegetation, have likely also affected goshawks (Martin et al. 1998).

Olive-sided flycatcher - Residential development along waterbodies, and timber management in general, has eliminated and greatly reduced many of the structural features that olive-sided flycatchers are associated with. These include large snags, tall trees, and uneven canopy forests.

Long-eared myotis, Long-legged myotis - Both species of *Myotis* bats have been affected by a reduction, across their ranges, of older forests; mature trees with complex structural characteristics, defect, and peeling bark; and large diameter snags. This has resulted from timber management practices that remove or modify these bats' habitat (particularly shorter rotation lengths), as well as general development and agricultural land uses that result in the removal of forested habitats.

Pacific Townsend's big-eared bat - Development, recreation, and other human activities have resulted in destruction or modification of caves, buildings, bridges, and rocks that provide day roosting, hibernation, or nursery sites for these bats. This is of high concern because big-eared bats are particularly sensitive to disturbance during these times, and may perish as a result of disturbance, or abandonment of suitable habitats.

Van Dyke's salamander - Destruction, modification, or curtailment of this species' habitat or range is of great concern because Van Dyke's salamander is found no where else in the world except Washington State, is associated with fairly limited and sensitive habitats, and is the most aquatic of woodland salamander species. The species is associated with seasonal headwater streams in forests that have not received much protection until recently under State forest practice rules and, thus, have likely been lost or degraded due to timber management practices. This species also uses woody debris - a habitat element that has been greatly diminished across the State's landscape over the last 200 years, due to development, forest management, and agricultural activities.

2) Overutilization for Commercial, Recreational, Scientific, or Educational Purposes ~
One of the unlisted species considered in these findings has been documented to have been overutilized for commercial, recreational, scientific, or educational purposes to such a degree that it would contribute to their need to be listed. Coastal cutthroat trout are believed to have been subjected to significant mortality through harvest occurring in both recreational trout and commercial salmon fisheries (Johnson et al. 1999). However, recent fishing regulations aimed at protecting this species are in place and overutilization of coastal cutthroat trout through fisheries are not expected to be a factor contributing to the need for listing in the future.

3) Disease or Predation ~
One of the 12 unlisted species under consideration is known to be affected by disease, to an extent that it could affect its need to be listed. Northwestern pond turtles are known to be affected by disease, particularly diseases that may be introduced by other turtles, such as those common in the pet trade. In 1993, for instance, approximately one-third of a known population of northwestern pond turtles in Klickitat County was lost to disease, believed to be brought into the native population by a loose pet turtle (K. McAllister, WDFW, pers. comm., 2003).

Three of the 12 unlisted species under consideration are believed to be affected by predation, to an extent that it could affect their need to be listed. The Oregon spotted frog and the northwestern pond turtle have experienced dramatic reductions in their historic ranges, and both are believed to be significantly affected by the introduction of non-native predator species. Specifically, bullfrogs, largemouth bass, and other non-native fish are known to prey on both Oregon spotted frogs (as tadpoles and as adults), and northwestern pond turtles (primarily as hatchlings). In addition, the great blue heron can be affected by a native predator, the bald eagle. Heron nestlings in colonies are known to be heavily preyed upon by bald eagles; some colonies have been abandoned due to intense eagle predation. With bald eagle populations on the rise in western Washington, great blue heron populations could suffer local or regional population declines within the State.

4) Inadequacy of Existing Regulatory Mechanisms ~
All 12 unlisted species are affected to some degree by the inadequacy of existing regulatory mechanisms, primarily because there are no regulatory mechanisms that guarantee a minimum level of habitat is provided, across a species range, to ensure its continued existence. However,

some general protection is provided to all of these species by protection of their supporting habitats through a number of Federal, State, and local laws. In particular, State forest practices rules in Washington regulate forest practices in instream and riparian areas to protect water quality and habitat for fish and amphibians, and mandate the leaving of standing and down wood. Washington State's Shoreline Management Act and local Critical Area Ordinances also ensure some protection for habitats along State waters and for sensitive or unique habitats, respectively.

However, habitat destruction, modification, or curtailment is still not adequately addressed by regulatory mechanisms, since certain land uses and development in general, still have profound impacts on habitat. Other land uses, such as agriculture (cropping, grazing), still remain largely unregulated. In particular, adequate protection of stream, riparian, and wetland habitats is still not in place at either the Federal, State, or local government levels.

5) Other Natural or Manmade Factors Affecting the Species' Continued Existence ~
Five of the 12 unlisted species' continued existence could be affected by other natural or artificial factors that could affect their need to be listed.

Coastal cutthroat trout populations in the Southwestern Washington/Columbia River Ecologically Significant Unit, in which the Plan lands occur, could be negatively affected by hatchery coastal cutthroat trout, being planted in Lower Columbia River tributaries, which include the Cowlitz River (Johnson et al. 1999).

Oregon spotted frog reproduction is potentially affected by increased ultraviolet radiation resulting from depletion of the earth's ozone layer, which is believed to affect embryonic development and survival. Similarly, climatic changes resulting in more frequent and/or severe drought, flooding, and temperature changes affect these frogs, and can be a significant factor in annual survival and reproduction (K. McAllister, WDFW, pers. comm., 2003). Oregon spotted frog habitat is potentially affected by large scale, watershed-wide hydrologic alterations, which likely affects the quality, quantity, timing, and availability of suitable aquatic breeding areas for this frog. It is assumed that Oregon spotted frogs and Van Dyke's salamanders, like most amphibians, are also affected by a wide range of chemical pollutants, particularly agricultural pesticides. Such contaminants are known to directly kill amphibians, as well as affect their reproduction, development, and behavior (Sparling et al. 2000).

Northwestern pond turtles are adversely affected by the proximity of roads to their habitat, and can suffer high mortality rates from being crushed by vehicles, as the turtles move away from waterbodies to upland habitats, outside of the breeding season (K. McAllister, WDFW, pers. comm., 2003).

Relationship of the Candidate Conservation Agreement with Assurances to the Five Threat Factors ~

The Plan is intended to reduce some of the threats to the 12 unlisted species under each of the 5 threat categories. Conservation benefits for these species from implementation of the Plan are expected primarily from the maintenance or growth of habitat.

Plan implementation would variously address the threats to the 12 unlisted species under all 5 factors upon which the Service would base a future ESA listing decision. A discussion of how the Plan addresses the threats to each species follows.

1) Threats from habitat destruction, modification, or curtailment of habitat and range will be reduced under the Plan. Generally, and as identified in the "Description of Proposal" on page 1 of this document, the Plan would provide for extended timber rotations, down wood, snags, protection of riparian and wetland habitats, protection of listed species nest trees, and protection of geologically sensitive sites.

Forest associated species covered by the Plan are great blue heron, pileated woodpecker, osprey, northern goshawk, olive sided flycatcher, the 3 bat species, and Van Dyke's salamander. These species are likely to be associated with some or all of the forest habitat conditions that would be provided during Plan implementation, and all are threatened by the destruction, modification, or curtailment of their habitat or range. These species would thus benefit from the Plan's: 50 to 85-year conifer harvest rotations; retention of approximately 20 percent of the parcel acreage in forest $\geq$ 40 years of age for 80 years; thinning to promote tree and understory growth; leaving three wildlife trees or snags $\geq$ 10 inches dbh per acre at the time of harvest; leaving four green recruitment trees $\geq$ 10 inches dbh per acre at the time of harvest, with three $\geq$ 14 inches dbh, and with two $\geq$ 20 inches dbh for each 10 acres; maintaining all leave trees, snags, and down wood as habitat features for the 80-year Plan term; leaving 138 trees of specified size within a 75-foot managed wetland buffer; not harvesting trees being used for nesting by northern spotted owls, marbled murrelets, or bald eagles, and not cutting those trees until at least 3 years after nest abandonment.

Species covered by the Plan that are associated with stream, wetland, and riparian habitats are coastal cutthroat trout, Oregon spotted frog, northwestern pond turtle, great blue heron, osprey, long-eared myotis, long-legged myotis, Pacific Townsend's big-eared bat, and Van Dyke's salamander. These species characteristically use aquatic features or riparian vegetation that would be provided during Plan implementation, and all are threatened by the destruction, modification, or curtailment of their habitat or range. These species would thus benefit from the Plan's following provisions: all down logs in riparian and wetland management zones will not be removed; slope integrity will be protected to prevent landslides and avoid the contribution of sediments to aquatic habitats; no equipment will be allowed within a 30-foot and a 50-foot distance of the fish-bearing stream to maintain bank stability and minimize erosion, and no yarding across the stream will occur; within 100 feet of the fish-bearing stream 150 trees >8 inches dbh with at least 8 conifers < 16 inches dbh will be provided along each 1000 feet of

stream; no equipment will be allowed within 30 feet of a wetland; and within 75 feet of a wetland, 138 trees > 8 inches dbh will be provided, 70 of those trees > 12 inches dbh and 10 trees > 20 inches dbh along each 1000 feet of wetland. Some reduced disturbance would also be realized if nesting herons are in the wetland, as timber harvest within 75 feet of the wetland on the Kinzie parcel would only be allowed during the period from July 15 to October 1. This provision should also minimize the potential for soil compaction and/or erosion, by avoiding wet weather conditions. And, if the land is managed under the Plan provisions for the full duration of the permit term (80 years), species would benefit by the land being kept in a forestry land use for that time period, rather than being converted to a land use that reduces or eliminates usable habitat.

Management that would benefit forest associated species (previously described) would also provide benefits to species using aquatic and riparian areas by: moderating disturbance from surrounding land uses; helping to maintain microclimatic conditions in aquatic and riparian habitats; contributing organic matter and down wood; and providing refuge and escape cover. In addition, leave tree requirements from upland forest management are likely to be clustered in and along riparian habitats, thereby increasing the density, cover, and possibly the diversity of those habitats. Maintaining the property in a forested condition should generally help maintain natural hydrologic regimes at each of the parcels. The diversity and complexity of native herbaceous and shrub cover should also generally be maintained over the permit term.

Should all necessary landowners within the historical range of the species–and with the same habitat conditions, watershed position, surrounding habitats and land uses, stream sizes, wetland types, and species presence as the Tagshinny Tree Farm–participate and provide conservation measures similar to those under the Plan, an incremental conservation benefit would be realized for these species. The Plan is expected to result in providing habitat suitable for these species' use during the permit period. Such habitat over the five parcels should help maintain these species' current populations and distribution over their range, and help extend these species' populations locally. However, the contribution is small relative to most of these species' overall range, and is dependent to a large degree, on surrounding land uses, as well as the size, extent, and connectivity of similar habitats with each of the parcels covered under the Plan. If conservation measures similar to those under the Plan, were implemented on all necessary properties, but tailored to other properties' site-specific qualities and species-specific use of those properties, the Service believes that the need to list these twelve unlisted species could likely be precluded or removed.

2) Threats from overutilization for commercial, recreational, scientific, or educational purposes are not expected to be affected by Plan implementation. This is because the Applicants have no control over commercial or recreational fishing regulations set by the State, and such regulations are primarily the mechanism for reducing or eliminating the threat of overfishing for coastal cutthroat trout. Scientific and educational purposes are not considered threat factors to any of the unlisted species, and are not expected to be affected by Plan implementation.

3) Threats to Oregon spotted frogs and northwestern pond turtles from disease and predation are not expected to be affected by the Plan, because timber management activities covered by the Plan would not influence the disease or predation factors for these species either positively or negatively. In addition, neither of these species are known to use the property, and their likelihood of becoming established on any of the five parcels is low.

However, timber management activities covered by the Plan are expected to result in habitat that could be used by both great blue herons and bald eagles. This could result in increasing the potential for eagles to prey upon heron on the property, particularly on the Kinzie parcel.

4) Threats from the inadequacy of existing regulatory mechanisms will be slightly reduced under the Plan, insofar as the Plan addresses habitat for unlisted species. However, this will only occur within the Plan area, or on the enrolled lands, which is a very small area, especially relative to the range of most of the unlisted species. Refer to the information presented in item #1 above, for more information on how the Plan affects unlisted species habitat.

5) Some threats from natural or manmade factors affecting the unlisted species' continued existence will be reduced to some degree under the Plan. Other threats will not be affected in any way by the Plan.

The potential effect of hatchery-origin coastal cutthroat trout on natural coastal cutthroat trout found in the Plan area would not be influenced by the Plan.

Plan implementation would not address the global, climatic, or societal issues that affect species' continued existence. Ozone depletion, climate changes and associated flooding and drought, and widespread contamination will not be influenced by the Plan. Thus, these types of threats, particularly for Oregon spotted frogs, northwestern pond turtles, and osprey, will not be ameliorated by the Plan.

The Plan would potentially reduce the threat of vehicles running over northwestern pond turtles, should they occur on or near any of the five parcels. This threat reduction would be related to the fact that lands covered under the Plan would presumably be kept in a forested condition with limited and infrequent vehicular access, rather than developed for another use which necessitates roadways and encourages frequent vehicle use.

III. ENHANCEMENT OF SURVIVAL PERMIT CRITERIA - ANALYSIS AND FINDINGS

The Service's analysis and findings with respect to the Agreements satisfying the permit issuance criteria called for by the Safe Harbor Policy and Final Rule (64 FR 32717) and by the CCAA Policy and Final Rule in accordance with 50 CFR 17.22(d)(2) follow.

These findings are based upon the following documents, and are herein incorporated by reference: 1) Tagshinny Tree Farm Conservation Plan, dated September 2003; 2) Biological Opinion on the effects of the issuance of Enhancement of Survival and Incidental Take Permits (includes Conference Opinion) under section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended, to Tom and Sherry Fox (Log Number 1-3-03-FWF-1591); and 3) the Environmental Action Statements for the Tagshinny Tree Farm Conservation Plan, both dated September 2003.

1. **The taking will be incidental to an otherwise lawful activity and will be in accordance with the terms of both the Safe Harbor Agreement and the Candidate Conservation Agreement with Assurances.**

   The taking will be incidental to the otherwise lawful activities that would occur as a result of forest practices conducted under the Washington State Forest Practices Act. The taking, including the return to baseline conditions, would be conducted in accordance with the proposed Agreements. The Applicants are responsible for obtaining other necessary authorizations, if any, under State, Federal, or local laws or regulations in order to carry out these activities. The validity of the permit will be conditioned upon strict observance of all applicable foreign, State, local, or other Federal laws.

2. **The implementation of the terms of the Safe Harbor Agreement will provide a net conservation benefit to the affected listed species by contributing to the recovery of listed species included in the permit. The Safe Harbor Agreement complies with the Service's Safe Harbor Policy and Final Rule. The Candidate Conservation Agreement with Assurances complies with the requirements of the Service's Candidate Conservation Agreement with Assurances policy.**

   The Applicants and the Service have developed a SHA in accordance with the Safe Harbor Policy and Final Rule (64 FR 32717) that allows for the creation and enhancement of habitat for listed species on the enrolled lands. The proposed Agreement will provide a net conservation benefit to the northern spotted owl, marbled murrelet, and bald eagle by providing forest habitat suitable for these species to use to disperse, roost, forage, perch, and possibly nest. Without the proposed Agreement it is unlikely that such habitat would be available, due to the regulatory disincentives for small landowners that coincide with the growth of older forest habitat. That is, it is unlikely that older trees (over 50 years of age) would be grown on the ownership due to landowner concern that ESA-induced prohibitions would prevent or severely restrict timber harvest.

   It is expected that the creation and maintenance of older forest habitat on the Tagshinny Tree Farm will provide some refuge for the three listed bird species. In addition, the assurances provided by the enhancement of survival permit may encourage other similarly situated landowners to seek SHAs, and may expand interest in a programmatic or regional HCP, thus expanding the net conservation benefit to the northern spotted owl, marbled murrelet, and bald eagle.

Based in part on the analysis provided in Part II of this document, the Service finds that the CCAA's conservation measures and expected benefits to the 12 unlisted species, when combined with those benefits that would be achieved if it is assumed that similar conservation measures were also implemented on other necessary properties, would preclude or remove the need to list the species, as discussed in the CCAA Policy and Final Rule. The Applicants' CCAA also complies with all other requirements of the CCAA Policy and Final Rule.

3. **The probable direct and indirect effects of any authorized take will not appreciably reduce the likelihood of survival and recovery in the wild of any listed or unlisted species.**

The Service permits would authorize incidental take of 3 listed and 12 unlisted species covered by the Plan. Incidental take for these species could occur through both harassment (disturbances that alter normal behavioral patterns), and harm (removal or degradation of habitat). While unlikely for most species, direct injury and death is also a potential means of take for covered species.

Incidental take authorized under the Service permits is expected to be low overall. For all species covered by the Plan, an actual number of individuals that could be taken over the permit period cannot be determined. However, take for each species is linked to habitat within the property ownership and, at most, is associated with 133 acres of forested land. Refer to the section of the attached Biological Opinion titled INCIDENTAL TAKE STATEMENT for a more detailed account of anticipated take under the Plan, for each species.

Issuance of these section 10(a)(1)(A) permits was reviewed by the Service under section 7 of the ESA. The ESA's legislative history establishes the intent of Congress that this issuance criteria be based on a "no jeopardy" finding pursuant to section 7(a)(2) of the ESA and the implementing regulations pertaining thereto (50 CFR 402.02). In a biological opinion, which is attached hereto and incorporated herein by reference, the Service concluded that the direct and indirect effects of any authorized take would not jeopardize the continued existence of the northern spotted owl, marbled murrelet, or bald eagle.

The Service's conclusion was reached in consideration of: (1) the lack of occupancy of the five covered parcels by any of the covered listed species; (2) the low likelihood of these species being onsite or using the property due to the small size of each of the five parcels, their distant location relative to other suitable habitat, and surrounding low quality or unsuitable habitat; (3) the low likelihood that take of these species would occur during the breeding season from timber harvest-related activities; (4) the anticipated low likelihood of take of the covered listed species from habitat degradation, and the relatively low quality habitat that is on site and that would develop over the permit term

for these species; (5) conservation measures that would minimize take by precluding removal of occupied nesting habitat for the three listed species; and (6) the Plan commitment to minimize take of bald eagles by not clearcutting the Highway 12 parcel which is the most likely suitable habitat for bald eagles on the tree farm.

Further, the Service expects that any incidental take of these listed species would be more than offset by the growth, maintenance, and improvement of forest stands on the property during the 80-year permit term, and prior to the return to baseline conditions. This would result in higher quality habitat for covered listed species than that which currently exists, providing a net benefit to them over the permit term.

Consistent with the Safe Harbor Policy, the enhancement of survival permit also authorizes incidental take of northern spotted owls, marbled murrelets, bald eagles, and their progeny on the enrolled lands that could result from lawful timber harvest activities conducted in accordance with the SHA. Monitoring and reporting conducted in accordance with the Plan will provide information on habitat type, location, and changes, as well as the occurrence and status of any covered species observed on the covered property, and the habitat condition.

In a conference opinion, which is incorporated here by reference (USFWS 2003), the Service concluded that the direct and indirect effects of implementing the CCAA and issuing the permit authorizing incidental take of 12 unlisted species would not appreciably reduce the likelihood of survival and recovery in the wild of those unlisted species.

The Service's conclusion was reached in consideration of: (1) the relatively small size of the five parcels of the tree farm and their dispersed location over the landscape, which represents a negligible amount of the overall range of the covered, unlisted species; (2) the current condition of habitat on the five parcels and the expectation that such habitat would increase in quality as it matures, over the permit term; (3) the provision of a diversity of habitat types and elements over the permit term, which provide support for some or all of the life requirements of each of the unlisted species at some point during their life history; and (4) current State forest practices regulations that provide complementary habitat for many of the unlisted species, on lands not covered by the Plan.

4. Implementation of the terms of the Safe Harbor Agreement and the Candidate Conservation Agreement with Assurances is consistent with applicable Federal, State, and Tribal laws and regulations.

The proposed Agreements are consistent with all applicable Federal and State laws and regulations.

In accordance with the National Environmental Policy Act, the Service prepared two Environmental Action Statements/Screening Forms and determined that the proposed Agreements and enhancement of survival permits qualify as a categorical exclusion based on 516 DM 2, Appendix 1 and 516 DM 6, Appendix 1 (issuance of a permit for activities regulated under 50 CFR Chapter 1, Subsection B when such permits cause no or negligible environmental disturbance).

To ensure that permit issuance is in compliance with Section 106 of the National Historic Preservation Act, the Service's Region 1 Cultural Resources Team conducted research and fieldwork for each of the Plan's parcels. The project is now considered in compliance (Clark 2003).

The Applicants are responsible for obtaining other authorizations, if any, necessary under State, Federal, or local laws or regulations in order to carry out covered activities. The validity of the permits will be conditioned upon strict observance of all applicable foreign, State, local, or other Federal laws.

There are no Tribal laws or regulations applicable to this project, and the Cowlitz Tribe has been coordinated with by both the Applicants and by the Service regarding the Plan and potential cultural resources on the Tagshinny Tree Farm. The Tribe has also been provided advance copies of the draft Plan for their review, as well as the opportunity to comment on the Plan during the public comment period.

5. **Implementation of the terms of the Safe Harbor Agreement and the Candidate Conservation Agreement with Assurances will not be in conflict with any ongoing conservation or recovery programs for listed species covered by the permits, or with any ongoing conservation program for unlisted species covered by the permits, respectively.**

Implementing the proposed SHA will not be in conflict with ongoing conservation and recovery programs for the northern spotted owl, marbled murrelet, and bald eagle. No final recovery plan for the northern spotted owl exists. The general recovery strategy for private land in the range of the northern spotted owl includes maintaining habitat suitable to provide connectivity of habitat and dispersal of individuals between Late Successional Reserves (LSRs) located on Federal land. While there are no LSRs located close enough to the Tagshinny Tree Farm parcels to benefit from this Agreement, an equally valuable conservation benefit is the incentive this Agreement provides to this and similarly situated non-industrial timberland owners to create and maintain high quality habitat. This is important because non-industrial timberland owners are the only potential source of high quality spotted owl habitat on private timberland, except for private landowners that have or will have a completed habitat conservation plan.

Implementing the proposed CCAA will not be in conflict with any ongoing conservation program for the twelve subject unlisted species; rather, it will complement efforts targeted toward species habitat conservation, as described below.

There are no State or Federal conservation or recovery programs in place to specifically provide target benefits to the unlisted species, except for the northwestern pond turtle and the Oregon spotted frog. Washington State's recovery program for the turtle is extensive, consisting of captive breeding, reintroduction, tracking, monitoring, and targeted habitat acquisition. State efforts for the frog are less intensive, consisting mainly of monitoring and more general habitat acquisition (K. McAllister, WDFW, pers. comm., 2003).

The other unlisted species and their supporting habitats are generally given some consideration through State regulatory processes, particularly during the Hydraulic Project Approval permitting process and the Forest Practices Application permitting process. Such consideration can result in habitat protection or minimization of habitat impacts for these unlisted species.

Given the Tagshinny Tree Farm Plan's conservation measures and permit term, the Plan is expected to promote growth of habitats and retention of habitat elements beneficial to the unlisted species. Thus, the Plan will not conflict with other conservation or recovery programs, but will be complementary to such programs.

6. **The Applicants have shown capability for and commitment to implementing all of the terms of the Safe Harbor Agreement and of the Candidate Conservation Agreement with Assurances.**

The principal owners of Tree Management, Inc. have been in the timber management business for 25 years and are members of the Washington Farm Forestry Association. Tom Fox helped found, and is part of, the Family Forest Foundation, a non-profit organization devoted to programmatic HCP development for non-industrial private forest owners in Lewis County. Sherry Fox is a board member for the Washington Farm Forestry Association - an organization which provides technical assistance to, and a voice for, family forest landowners.

The Applicants have been working with the Service for over 5 years to develop a conservation plan that is easily implemented on the subject lands and meets the landowners' short- and long-term management objectives. The Applicants have invested considerable time, effort, and financial resources in Plan development. In addition, for the last 25 years, Tom Fox has been the president of Tree Management Plus, a successful forestry consulting and contracting business, which assists small forest landowners with forest resource management.

As a result of the Applicants' occupations, volunteer activities, and association with Federal conservation planning, the Service believes the Applicants have demonstrated capability in forest management (planning, maintenance, silviculture, and business transactions), and have evidenced ongoing interest, energy, and commitment to managing private timber lands in an economically viable manner that will also provide conservation benefits to the covered species.

Further, the Agreements are legally binding and assure the performance of the signatory parties. Implementation of the Agreements will be a condition of the permits, and a failure to perform obligations under the Agreements could result in suspension or revocation of the enhancement of survival permits, and cancellation of the Agreements.

IV. PUBLIC COMMENT

The Service and the National Marine Fisheries Service published a Notice of Availability of an Environmental Action Statement and receipt of an application for the issuance of enhancement of survival permits for the Plan in the *Federal Register* on March 26, 2003. Publication initiated a 30-day public comment period that closed on April 24, 2003. Copies of the draft Environmental Action Statement and proposed Plan were mailed to over 50 interested parties and upon request to 2 parties.

The Service and National Marine Fisheries Service collectively received 16 comment letters during the 30-day comment period. No comments opposing the Plan or permit issuance were received. Fifteen of the comment letters were clearly supportive of the Plan and associated Federal permit issuance.

Comment: Five commenters encouraged future streamlining of the HCP process (or the development of an alternative to the HCP process) in order to make attainment of Federal assurances less costly, less time-consuming, and more feasible for small forest landowners.

Service's Response: The Service recognizes that current processes required to obtain Section 10 regulatory assurances are burdensome to small landowners. The Service encourages umbrella and programmatic conservation planning efforts that may cover numerous landowners in a particular geographic region. The Service will consider new options for streamlining conservation planning wherever possible.

Comment: One commenter expressed concern that the limited use of chemical sprays was not included in the Plan, and that use according to label instructions should be required/permitted.

Service's Response: Chemical use was not addressed as a covered forest management activity because the Service has a policy that pesticide and herbicide applications will not be considered for inclusion as a covered activity in incidental take permits. This policy is based on the relationship between the use of pesticides/herbicides and the role of the Environmental

Protection Agency (EPA) in defining the label instructions for such use. Section 7 of the ESA mandates Federal agencies to consult with the Service to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of endangered or threatened species or destroy or adversely modify critical habitat. The EPA authorizes the use of pesticides and herbicides through the Federal Insecticide Fungicide and Rodenticide Act registration requirements. Incidental take of listed species that may result from use of a registered pesticide or herbicide, therefore, should be addressed under section 7 formal consultation procedures, of the ESA, between the EPA and the Service and, thus, it is unnecessary to include chemical applications as a covered activity in conservation plans developed under section 10 of the ESA.

Comment: Washington Department of Fish and Wildlife (WDFW) offered several specific comments: (1) the Applicants are encouraged to consult with WDFW when locating leave trees; (2) there is no effectiveness monitoring plan within the Plan; (3) an equipment limitation zone should be designated on the non-fish portion of Skook Creek; (4) small scale wood placement should be promoted; (5) the use of limitations of pesticides should be clarified, and (6) the Plan should specify if State forest practices rules for down wood requirements are being followed.

Service's Response: (1) The Service will encourage the Applicants to consult with WDFW when locating leave trees, to maximize habitat and species benefits. This will be included in our section 7 Biological Opinion as a Conservation Recommendation. (2) While the Service recognizes that it is desirable to be able to judge the effectiveness of Plan implementation, no effectiveness monitoring is built into the Plan nor required of the Applicants because the proposed forest management activities are reasonably expected to result in the stand conditions described in the plan, i.e. multi-layered canopies, adequate openings for development of understory shrub layers, adequate shading of streams the size of which occur on the property, and recruitment of downed woody debris to the stream and riparian habitat. (3) There is an equipment limitation zone (ELZ) on the south side of the non-fish portion of the Skook Creek tributary. The ELZ on this portion of the stream measures 20 feet in width, and is expected to protect vegetation capable of providing shade to this small stream, and contribute to minimizing sediment input to the stream. (4) The Service will encourage the Applicants to consult with WDFW about the potential for small wood placement when harvest units occur in proximity to the creek. This will be included in our section 7 Biological Opinion as a Conservation Recommendation. (5) See Service's Response above to the previous comment regarding pesticide use. (6) The Service believes that the commitments for down wood provide adequate habitat features for use by the covered species as prey sources and for nesting or roosting opportunities: retain all existing dead and down trees, including defective portions of merchantable trees and tops on the forest floor, for the term of the Plan; minimize disturbance to down woody debris; retain all standing dead trees except under salvage operation conditions or for safety concerns; and retain a minimum of standing dead and green wildlife trees per acre. It should be noted that under the current proposed Plan, the Applicants have also committed to retaining (not removing) all presently downed wood in the future from both wetland and riparian areas.

Comment: Environmental Defense commented that, in the future, the Service should calculate Applicants' baseline responsibilities differently than they were in the Plan.

Service's Response: In accordance with the Service's Final Safe Harbor Policy (64 FR 32717, June 17, 1999), baseline conditions can be expressed in terms of either listed species population numbers, habitat occupied by those listed species, or both. For the Tagshinny Tree Farm Conservation Plan, no listed species are known to occupy any of the ownership. However, a habitat approach was used to determine baseline, focusing on the amount of suitable habitat. By mutual agreement with the Applicants, the habitat baseline was established as 19 percent of the forested ownership, or 25 acres, of moderate quality conifer forest greater than 40 years old, of which 2 percent must be greater than 80 years old. This baseline represents habitat which could reasonably be expected to be used by listed species covered by the Plan.

V. GENERAL CRITERIA AND DISQUALIFYING FACTORS - ANALYSIS AND FINDINGS

The Service has no evidence that the permit application should be denied on the basis of criteria and conditions set forth in 50 CFR 13.21(b) through (c). The Applicants have met the criteria for the issuance of the permits and approval of the Agreements and do not have any disqualifying factor that would prevent the permits from being approved under current regulations.

VI. RECOMMENDATION ON PERMIT ISSUANCE

Based on the foregoing findings with respect to the proposed permit issuance, I recommend issuance of section 10(a)(1)(A) enhancement of survival permits to authorize the incidental taking of the 3 listed and 12 unlisted species addressed in these findings in accordance with the Applicants' Tagshinny Tree Farm Conservation Plan, which entails a SHA and a CCAA.

David H Wesley

Deputy Regional Director
Regional Office, Portland, Oregon

2/19/04
Date

Attachments

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